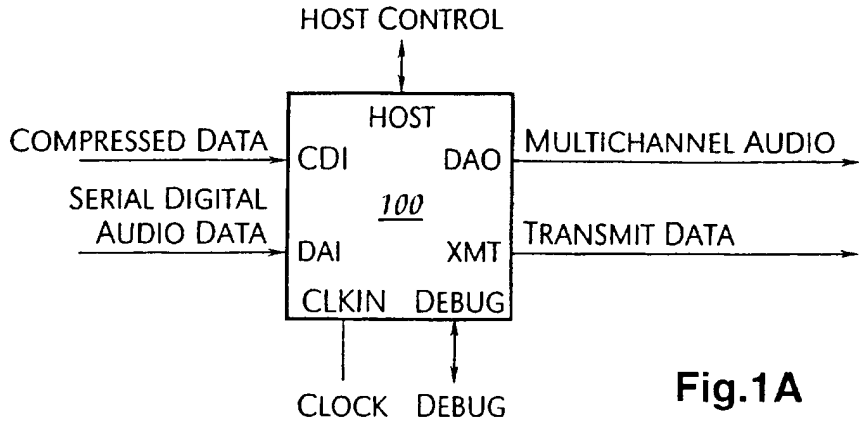

Fig.1A

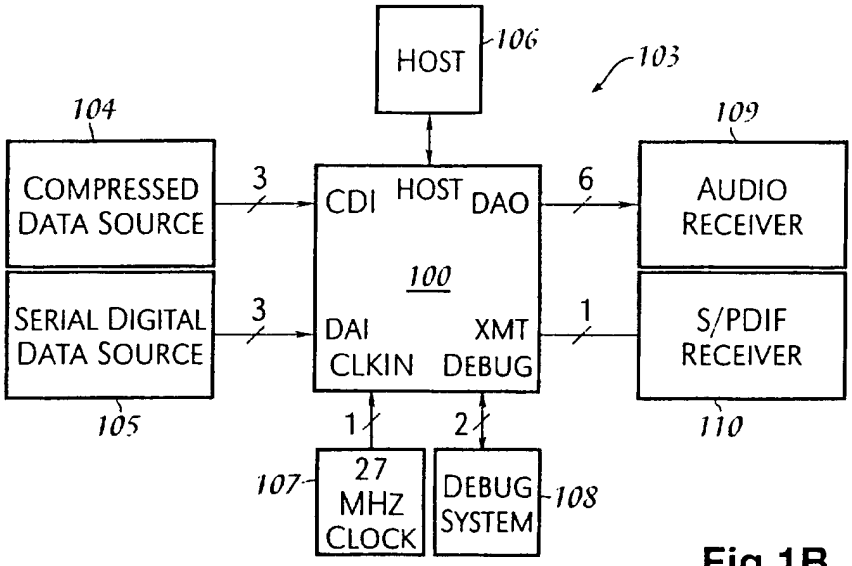

Fig.1B

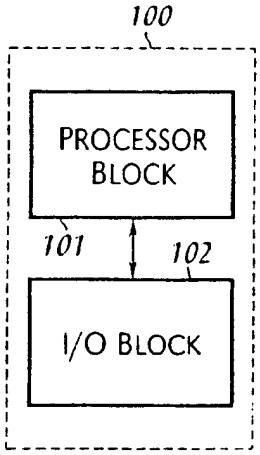

Fig.1C

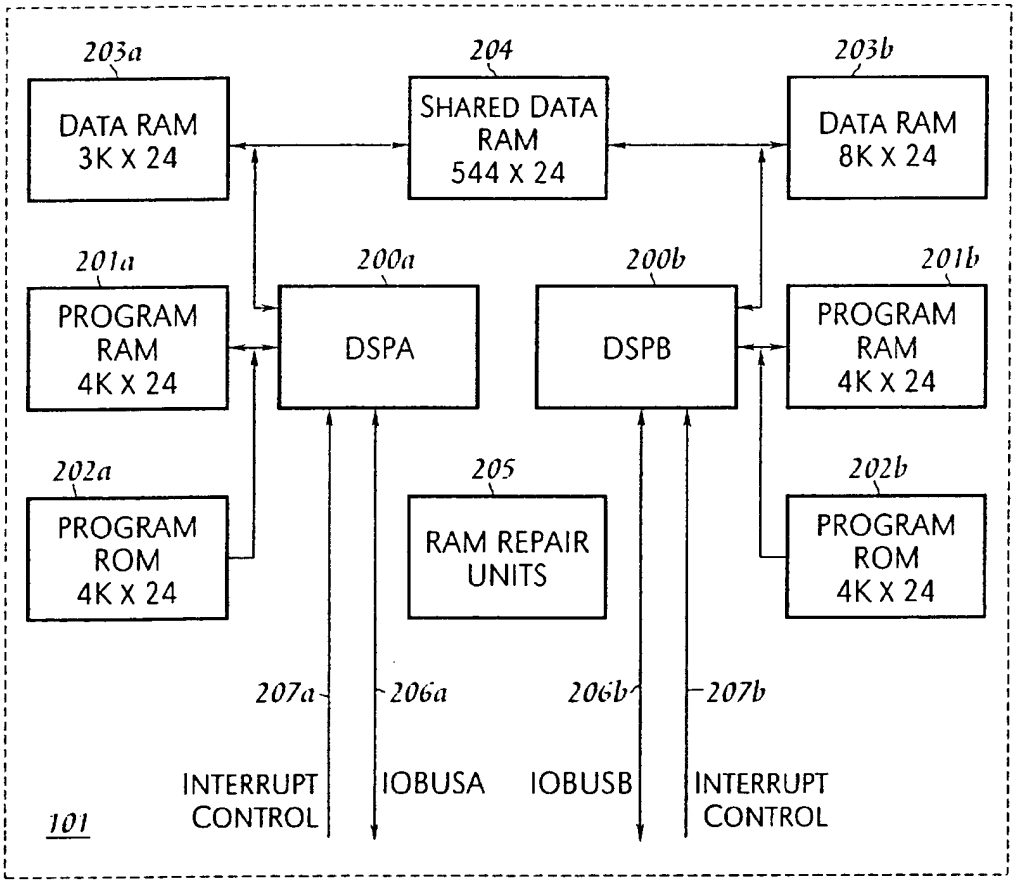
203a
DATA RAM
3K X 24
204
SHARED DATA
RAM
544 X 24
203b
DATA RAM
8K X 24
201a
PROGRAM
RAM
4K X 24
200a
DSPA
200b
DSPB
201b
PROGRAM
RAM
4K X 24
202a
PROGRAM
ROM
4K X 24
205
RAM REPAIR
UNITS
202b
PROGRAM
ROM
4K X 24
207a
206a
206b
207b
INTERRUPT
CONTROL
IOBUSA
IOBUSB
INTERRUPT
CONTROL
101

Fig. 2

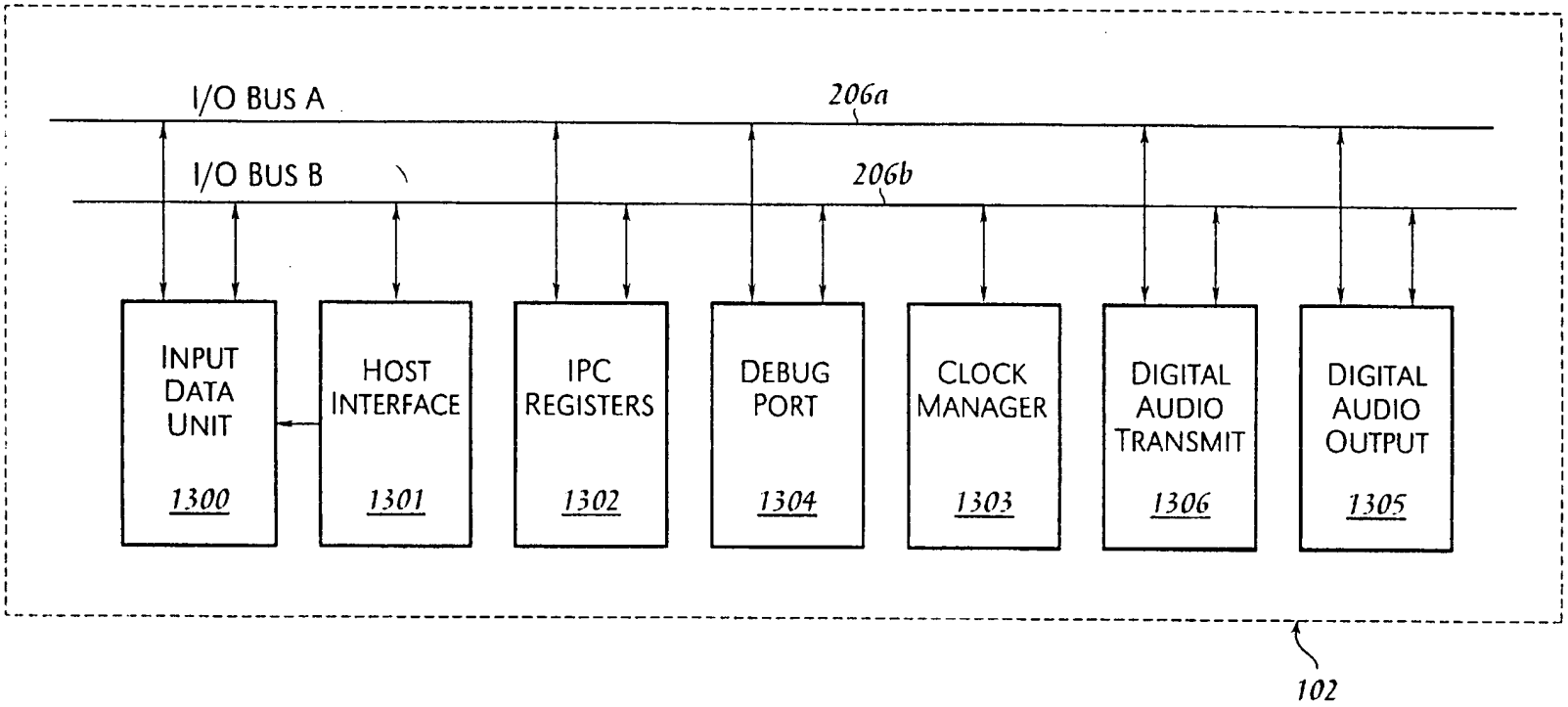
I/O BUS A
206a
I/O BUS B
206b
INPUT DATA UNIT
1300
HOST INTERFACE
1301
IPC REGISTERS
1302
DEBUG PORT
1304
CLOCK MANAGER
1303
DIGITAL AUDIO TRANSMIT
1306
DIGITAL AUDIO OUTPUT
1305
102

Fig. 3

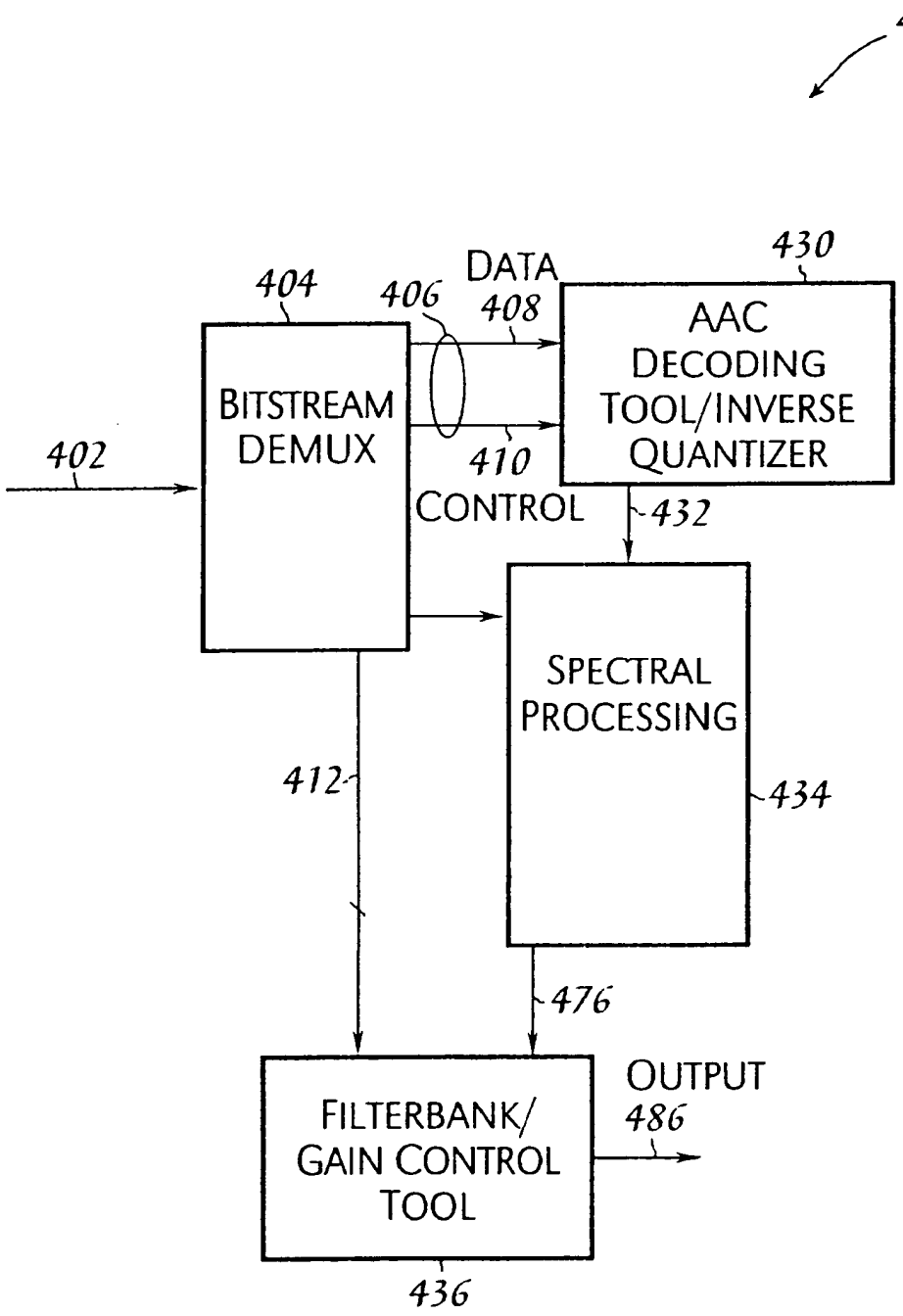
400
404
406
DATA
408
430
AAC
DECODING
TOOL/INVERSE
QUANTIZER
BITSTREAM
DEMUX
402
410
CONTROL
432
SPECTRAL
PROCESSING
412
434
476
FILTERBANK/
GAIN CONTROL
TOOL
OUTPUT
486
436

Fig. 4

2536-P276US

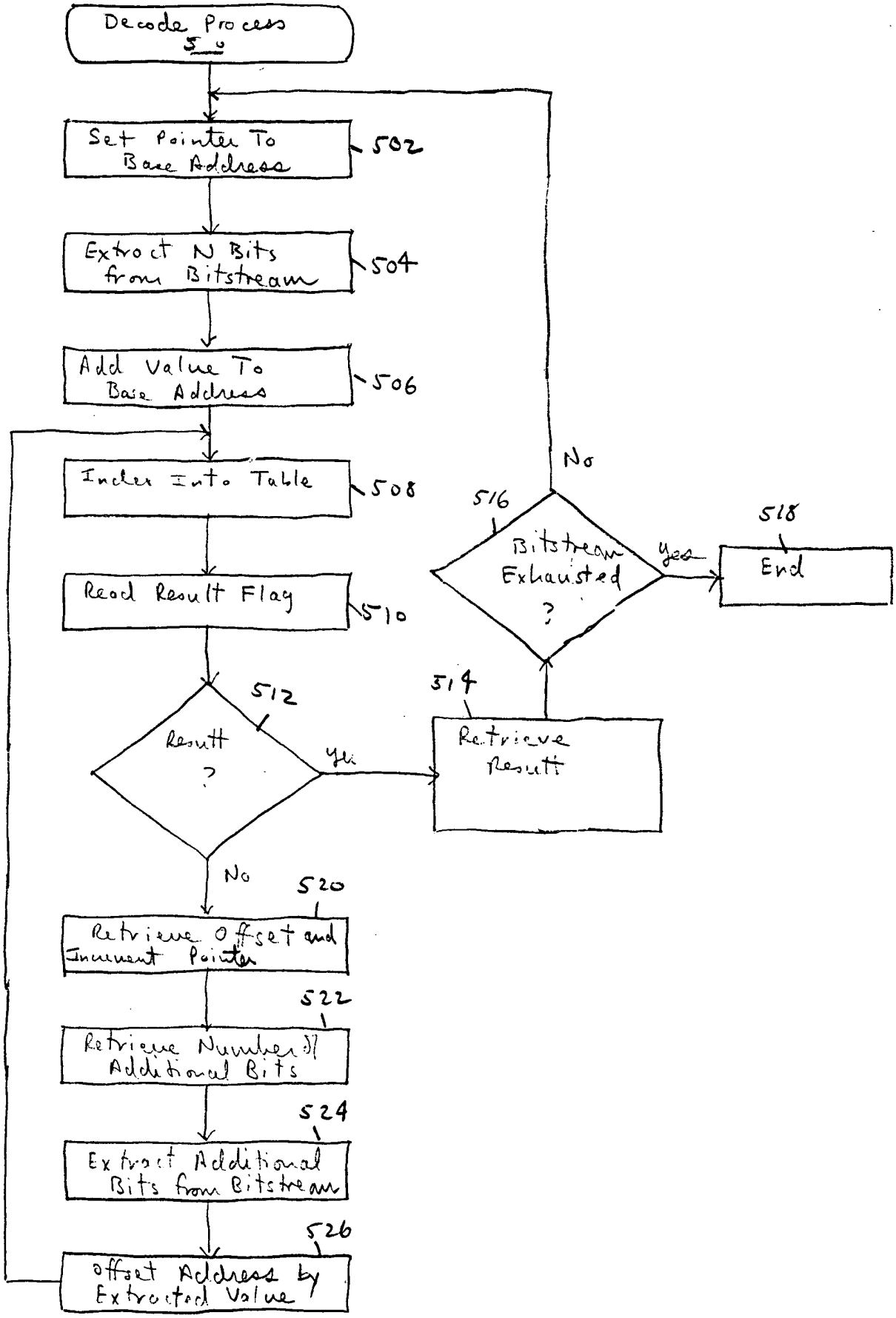

FIG. 5

2836-P276US

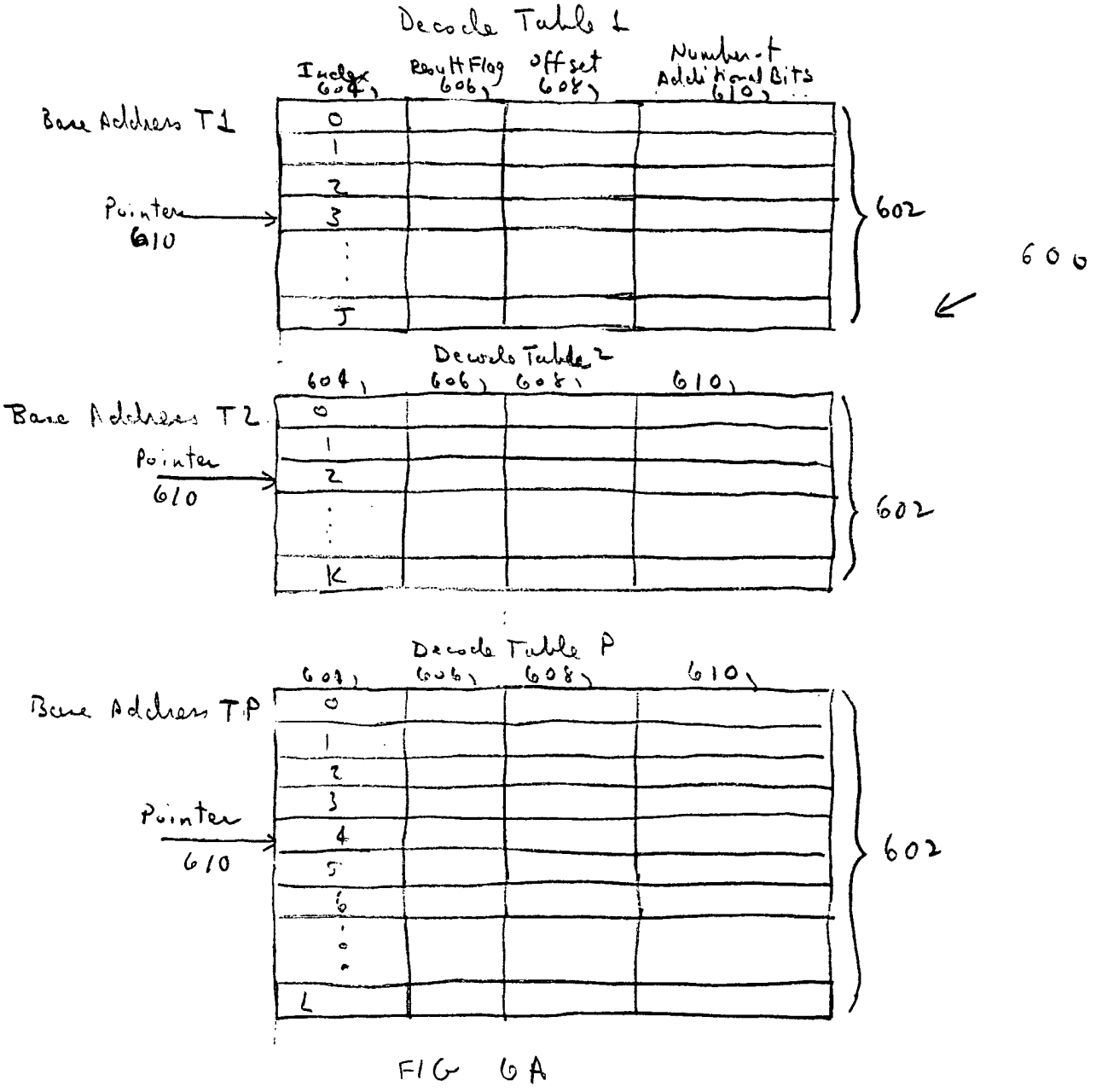

FIG 6A

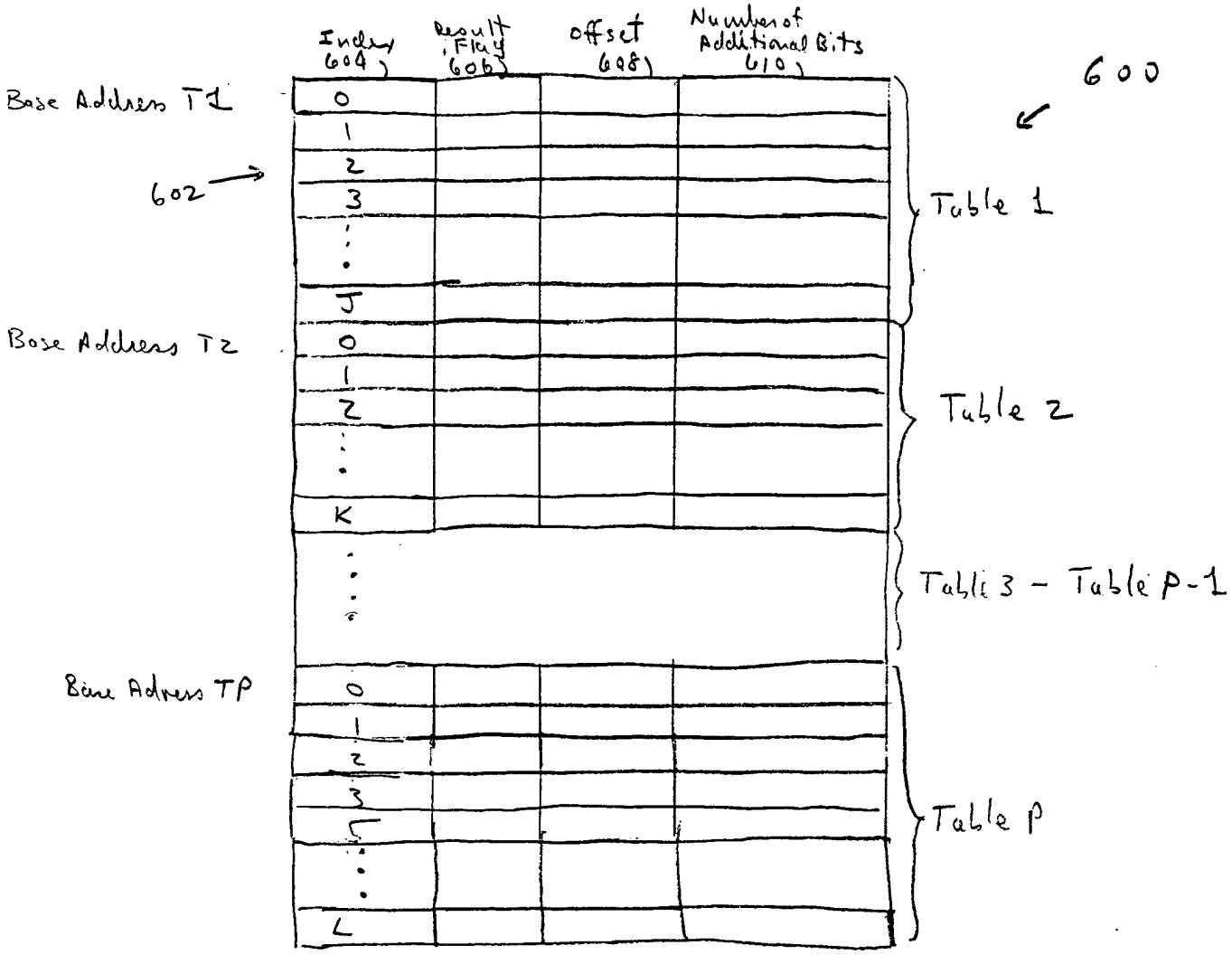
Index (604)
Result Flag (606)
offset (608)
Number of Additional Bits (610)
600
Base Address T1
602
0
1
2
3
J
Table 1
Base Address T2
0
1
2
K
Table 2
Table 3 - Table P-1
Base Address TP
0
1
2
3
L
Table P

FIG 6B

2836-P276US

Codeword 702	Result 704
00	"Result 1"
01	"Result 2"
100	"Result 3"
101	"Result 4"
1100	"Result 5"
1101	"Result 6"
1110	"Result 7"
111100	"Result 8"
111101	"Result 9"
111110	"Result 10"
111111	"Result 11"

700

FIG. 7

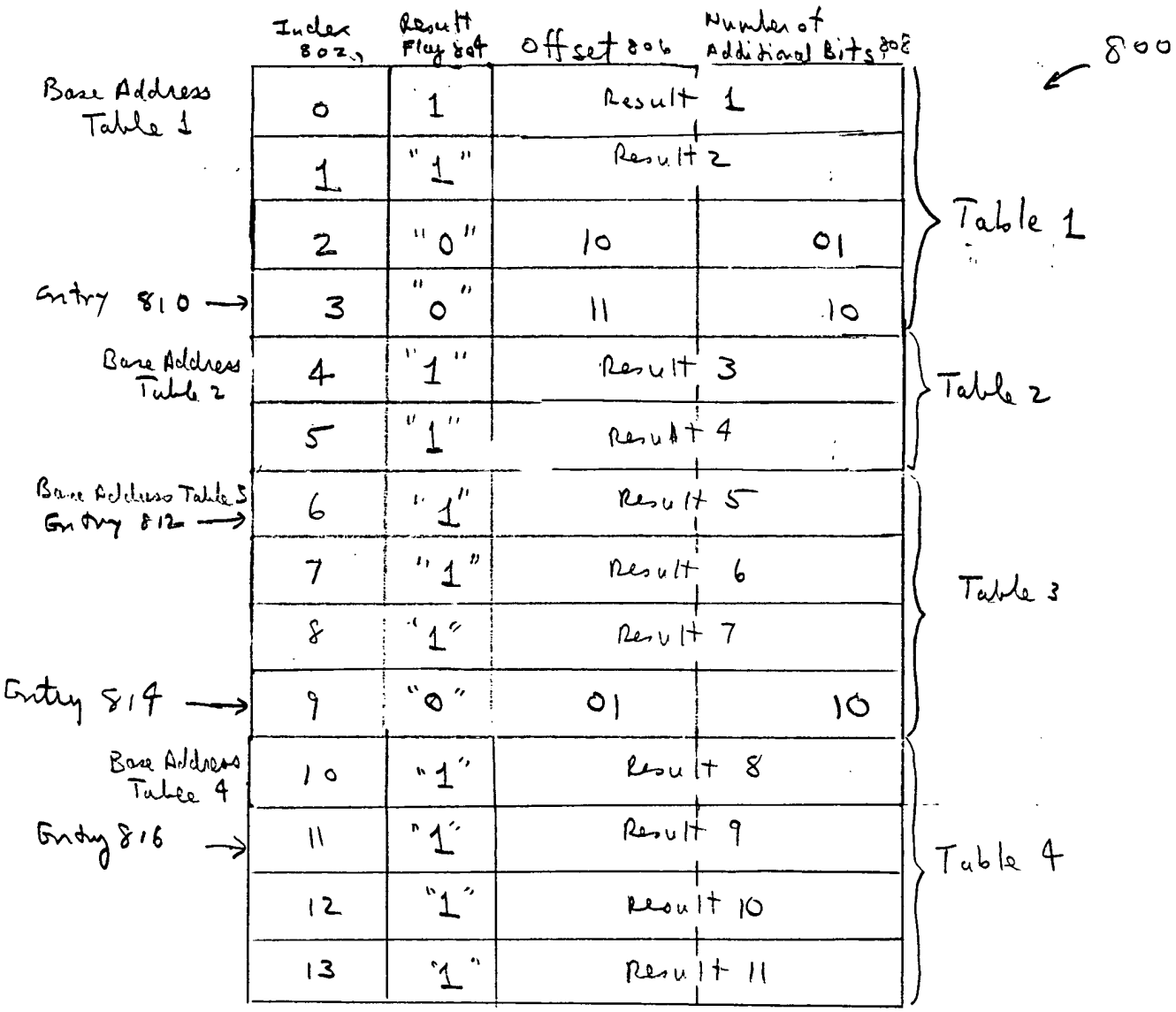
800
Index 802
Result Flag 804
Offset 806
Number of Additional Bits 808
Base Address Table 1
Entry 810
Base Address Table 2
Base Address Table 3
Entry 812
Entry 814
Base Address Table 4
Entry 816
0 1 Result 1
1 "1" Result 2
2 "0" 10 01
3 "0" 11 10
4 "1" Result 3
5 "1" Result 4
6 "1" Result 5
7 "1" Result 6
8 "1" Result 7
9 "0" 01 10
10 "1" Result 8
11 "1" Result 9
12 "1" Result 10
13 "1" Result 11
Table 1
Table 2
Table 3
Table 4

FIG. 8

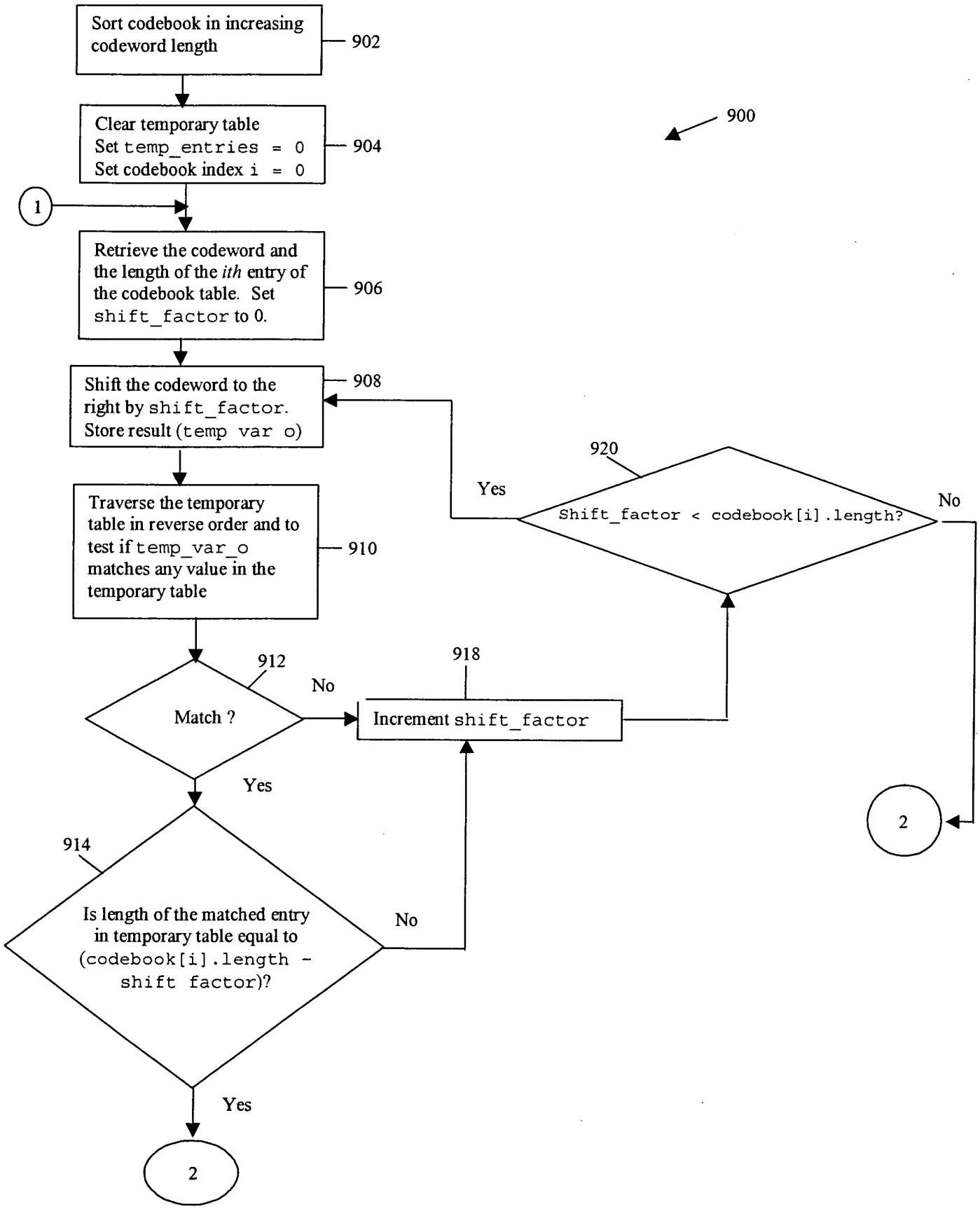
Sort codebook in increasing codeword length
902
900
Clear temporary table
Set temp_entries = 0
Set codebook index i = 0
904
1
Retrieve the codeword and the length of the ith entry of the codebook table. Set shift_factor to 0.
906
Shift the codeword to the right by shift_factor. Store result (temp var o)
908
920
Yes
Shift_factor < codebook[i].length?
No
Traverse the temporary table in reverse order and to test if temp_var_o matches any value in the temporary table
910
912
No
Match ?
918
Increment shift_factor
Yes
2
914
Is length of the matched entry in temporary table equal to (codebook[i].length - shift factor)?
No
Yes
2

Fig. 9A

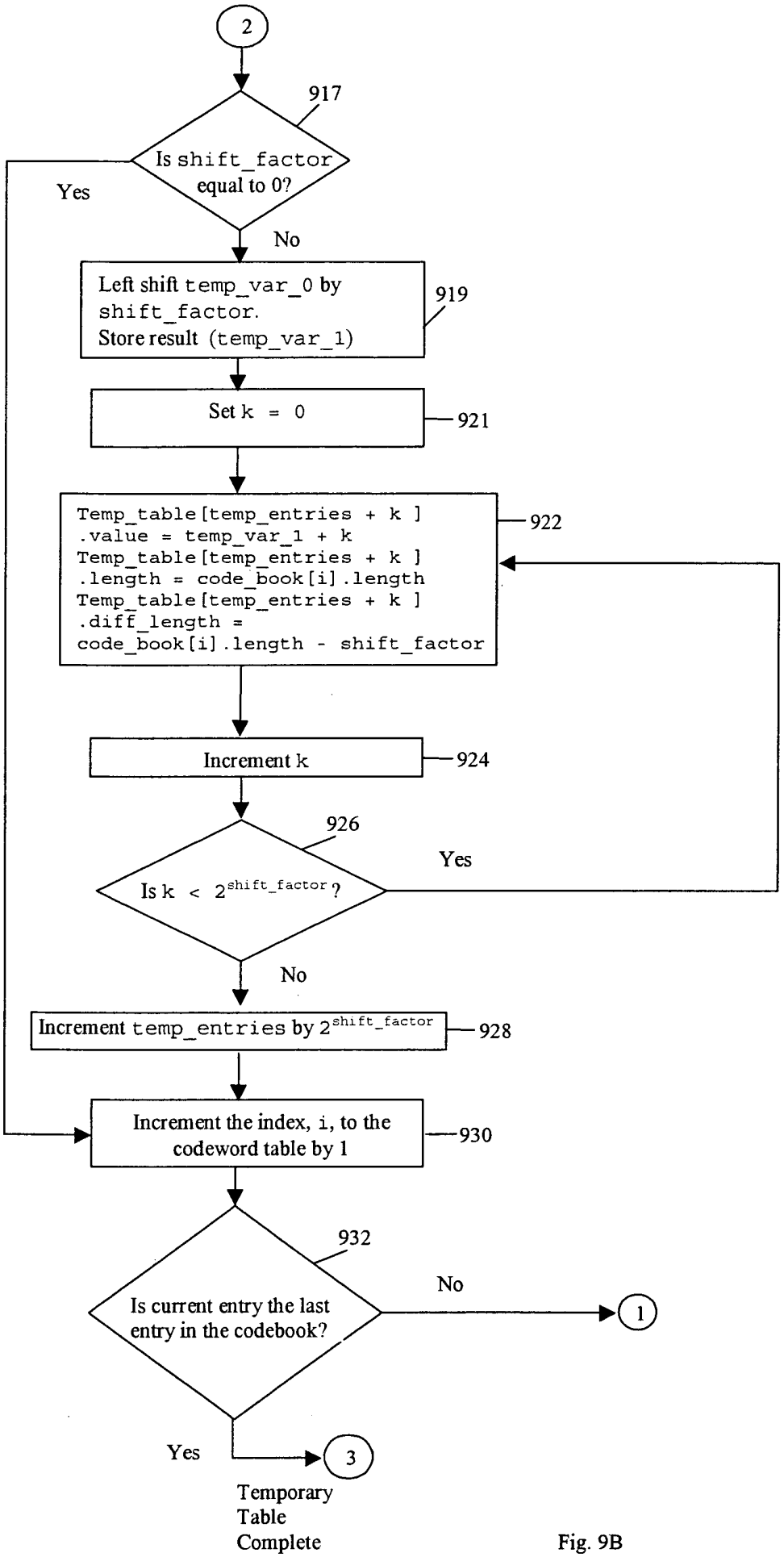
2
917
Is shift_factor equal to 0?
Yes
No
Left shift temp_var_0 by shift_factor. Store result (temp_var_1)
919
Set k = 0
921
Temp_table[temp_entries + k].value = temp_var_1 + k
Temp_table[temp_entries + k].length = code_book[i].length
Temp_table[temp_entries + k].diff_length = code_book[i].length - shift_factor
922
Increment k
924
926
Is k < 2^shift_factor ?
Yes
No
Increment temp_entries by 2^shift_factor
928
Increment the index, i, to the codeword table by 1
930
932
Is current entry the last entry in the codebook?
No
1
Yes
3
Temporary Table Complete

Fig. 9B

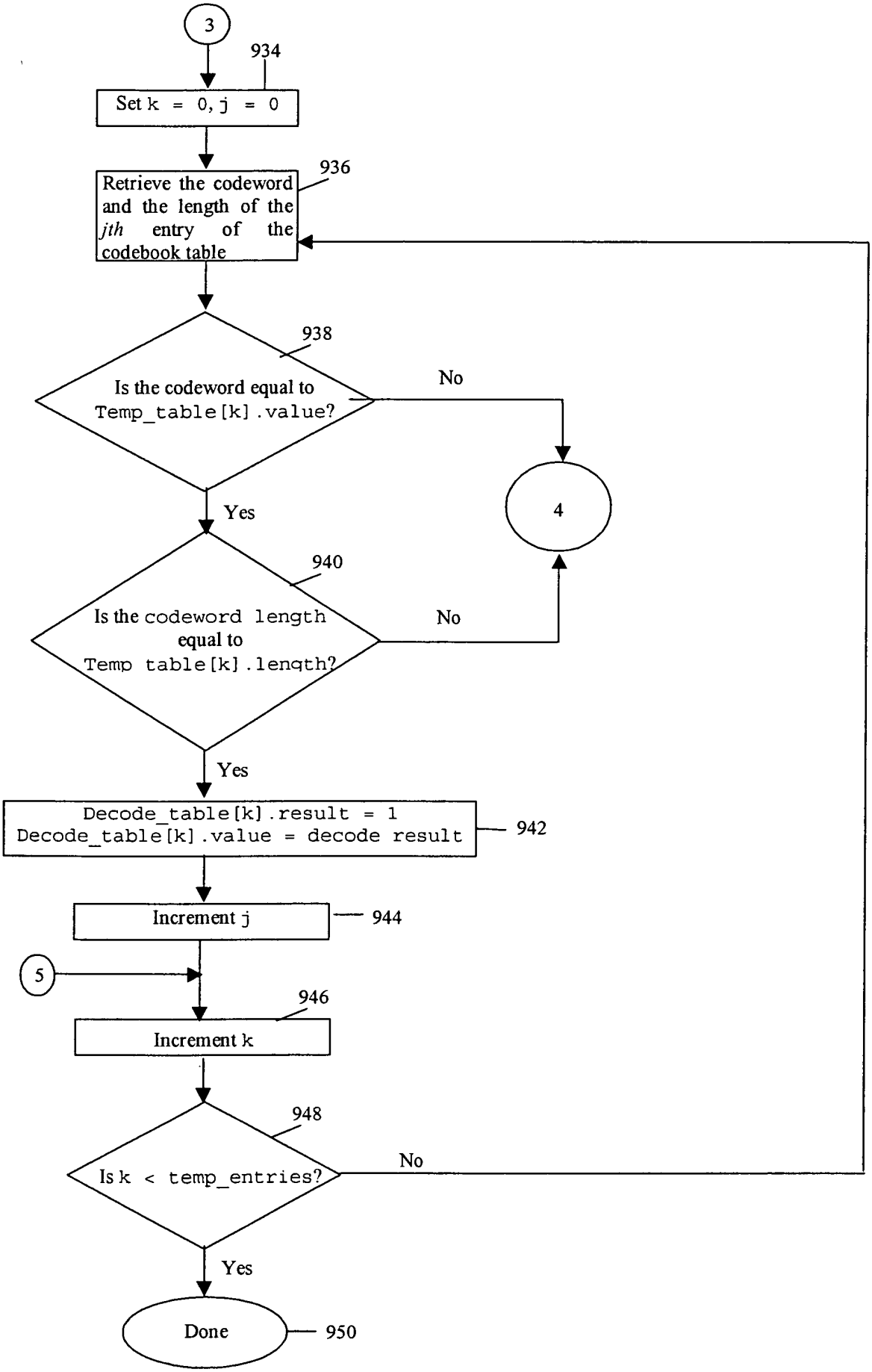
3
934
Set k = 0, j = 0
936
Retrieve the codeword and the length of the jth entry of the codebook table
938
Is the codeword equal to Temp_table[k].value?
No
Yes
4
940
Is the codeword length equal to Temp table[k].length?
No
Yes
Decode_table[k].result = 1
Decode_table[k].value = decode result
942
Increment j
944
5
946
Increment k
948
Is k < temp_entries?
No
Yes
Done
950

Fig. 9C

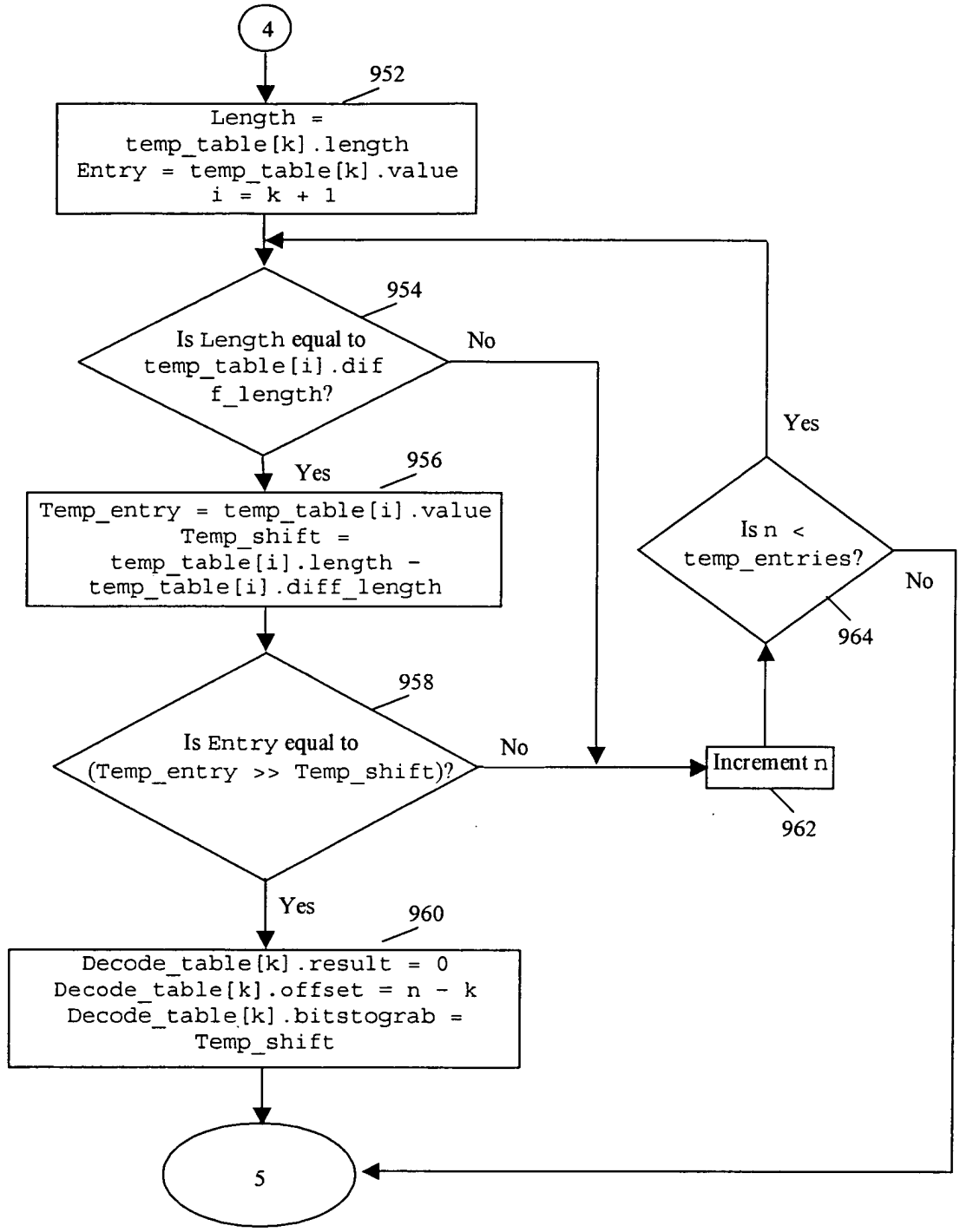
4
952
Length = temp_table[k].length
Entry = temp_table[k].value
i = k + 1
954
Is Length equal to temp_table[i].diff_length?
No
Yes
956
Temp_entry = temp_table[i].value
Temp_shift = temp_table[i].length - temp_table[i].diff_length
958
Is Entry equal to (Temp_entry >> Temp_shift)?
No
Yes
960
Decode_table[k].result = 0
Decode_table[k].offset = n - k
Decode_table[k].bitstograb = Temp_shift
5
Increment n
962
Is n < temp_entries?
964
Yes
No

Fig. 9D

2836-P276US

1002 Code Book	1004 M-ary Search	1006 Binary search	1008 Two-step table lookup
HCB_1	49	81	160
HCB_2	56	81	113
HCB_3	59	81	793
HCB_4	53	81	226
HCB_5	54	81	288
HCB_6	54	81	166
HCB_7	43	64	218
HCB_8	46	64	123
HCB_9	114	169	603
HCB_10	114	169	290
HCB_11	183	289	408
HCB_SF	82	121	2060

FIG. 10

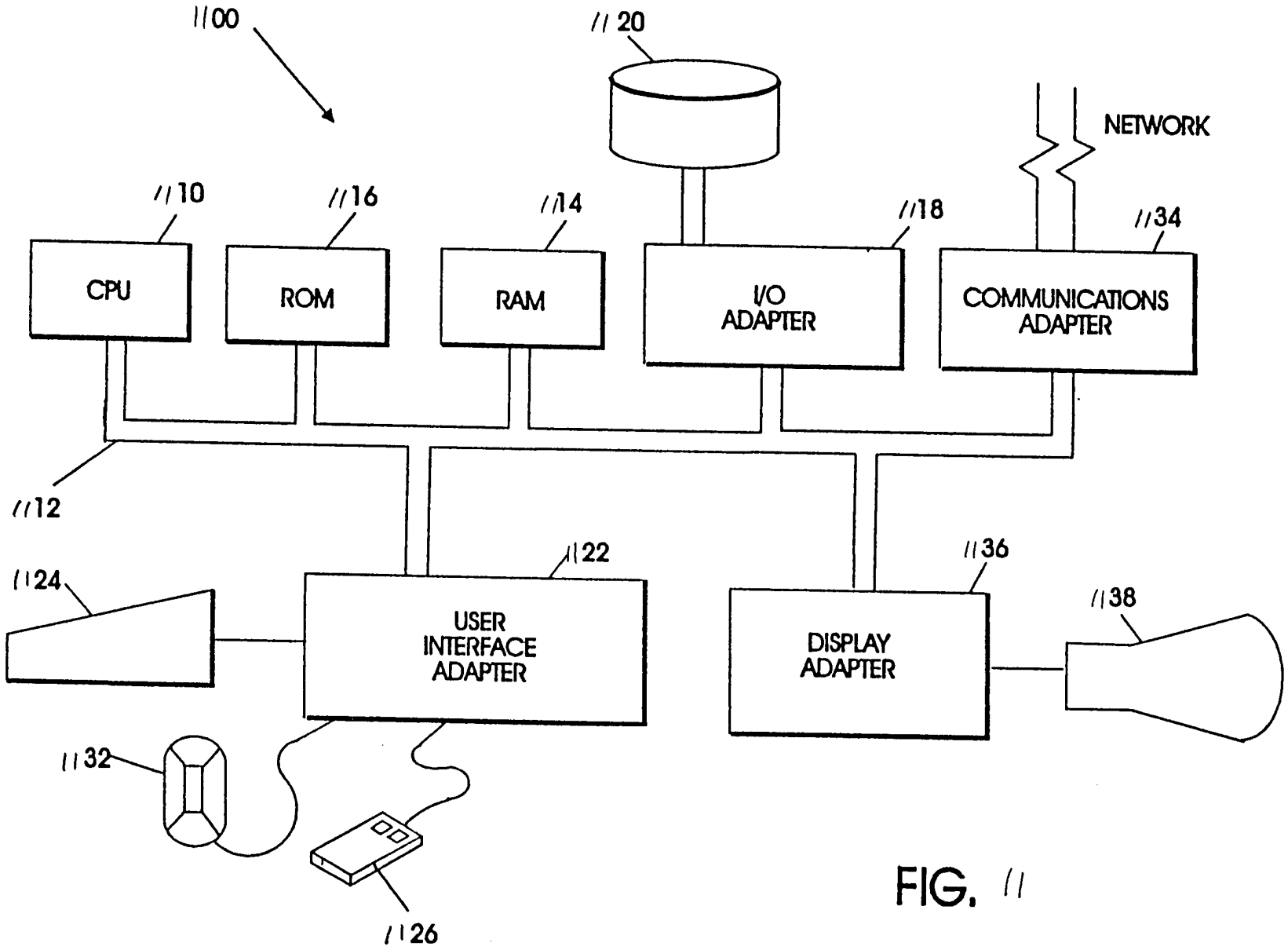
1100
120
NETWORK
110
116
114
118
134
CPU
ROM
RAM
I/O ADAPTER
COMMUNICATIONS ADAPTER
112
122
136
124
138
USER INTERFACE ADAPTER
DISPLAY ADAPTER
132
126

FIG. 1